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PATENT SPECIFICATION



Convention Date (Australia): Sept. 22, 1920.

169,440

Application Date (in United Kingdom): Sept. 16, 1921. No. 24,865/21.

Complete Accepted: Apr. 13, 1922.

COMPLETE SPECIFICATION.

A Ship Adapted for the Killing of Animals and the Freezing of their Carcasses.

I, MAXWELL MCGINNESS, British subject, of 14, Beaconsfield Parade, St. Kilda, near Melbourne, in the State of Victoria, Commonwealth of Australia, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

10 This invention relates to the penning and killing of animals and the dressing and quartering of their carcasses and the subsequent chilling freezing and storing of the meat, the chief object being to so equip a vessel that it becomes a kind of floating abattoir and cold meat storage works combined. The transport of live cattle and other animals by ship is of course well known and for this purpose it

15 has been proposed to provide a vessel with a deck specially constructed to afford accommodation for cattle in pens on the deck and it has also been proposed to form a vessel composed of hulls spaced apart and bridged by a specially constructed spanning deck or tier of decks. So far as I am aware however a floating abattoir and cold meat storage works combined is entirely new. Moreover the provision of

20 such an outfit in accordance with my invention does not necessarily involve a construction departing materially from the conventional principles of ship building and I may in fact adapt any suitable existing ship to the purpose I have in view. No ship as ordinarily constructed however affords sufficient room or suitable accommodation for killing cattle in commercially profitable quantities, and even

25 if a sufficiently large vessel of ordinary construction were available it would not be commercially practicable to pen live

cattle in large quantities upon it and to kill them on board ship owing to the refuse and offensive smell incidental to such a course and the consequent tainting of the freshly killed meat which while under treatment is particularly susceptible to absorbing noxious odours. Furthermore the cooling of the animals when penned prior to slaughter by spraying them on deck is absolutely necessary in hot regions but the spraying of animals on an ordinary deck would render them liable to slip and bruise themselves in falling, and an artificially uneven flooring would become unsanitary by clogging with refuse.

More specifically stated, therefore, an important object of the present invention is to so equip a vessel that it is commercially practicable to embark animals in large numbers from lighters or otherwise and to pen them under sanitary, airy, conditions without rendering the vessel permanently unseaworthy and rendering it feasible to kill the animals on board and to dress freeze and store the meat on board.

With the above object in view the present invention consists in providing a vessel with detachable or collapsible lateral extensions attached to and extending along one or both sides of the vessel of such a character as to enable cattle to be penned with adequate ventilation drainage etc., while waiting to be killed. More specifically stated the main feature of the invention is the provision on a vessel of removable or folding grid-like lateral extensions or lairs, arranged preferably flush with the deck.

The chief results and advantages of such extensions may be summarised as

[Price 1/-]

follows:—(1) They provide adequate temporary additional space without rendering the vessel unseaworthy.

(2) They permit end-on mooring of a lighter and end-on transfer of the animals by a straight run up a ramp.

(3) They obviate the danger of tainting the meat. (4) They enable good sanitary conditions to be maintained (a) by

penning the animals with plenty of free air, (b) by permitting droppings and refuse generally to fall into the sea without clogging the deck (c) by enabling the animals to be cooled by water, or air and

water, sprays from above without producing a slippery foothold or flooding the decks, (d) by enabling air or water (from the sprays) to travel up or down freely past and between the animals as they stand penned, and (e) by rendering washing down of the standing space particularly easy and efficient.

The lateral extensions are detachably mounted by detachable stanchions or supports and are otherwise constructed so that they may be dismantled and packed away or folded when not in use.

In order that the invention may be more readily understood it will now be described with reference to the accompanying drawings in which:—

Figure 1 is a view in plan of a vessel having the invention embodied thereon.

Figure 2 is an enlarged view in plan of a portion of the vessel shewn in Figure 1.

Figures 3 and 4 illustrate sectional views of details of construction.

On one side or on each side of the ship on the deck level is mounted a cattle pen 1 and at both ends of the cattle pen 1 are shewn a pithing or killing pen 2 and a dressing pen 3, although it will be understood that the killing and dressing may be accomplished on the ship's deck.

The cattle may be delivered to the pen 1 in any convenient manner, a pontoon 4 and cattle gangway 5 being shown but in some circumstances they may be driven direct from a wharf.

The pens 1 are preferably formed of gratings 6 with rails 15 and it is preferred that the pens be capable of being lifted from position and stored when not in use. This may be accomplished in any suitable way and the framing of the pens is preferably arranged in sections with detachable or folding parts, the sections being lifted by the derricks 7 controlled by the winch 8.

In the construction illustrated in Figure 3 the pens are detachably mounted in supports fitted to the ship's side, the

floor of the pen being provided with lugs 9 fitted with holding keys passing into the supports 10 while further supports 11 receive supporting brackets 12 fitted to the floor of the pen, a further stanchion 13 being also provided.

These parts are preferably detachably mounted and the side rail 15 is preferably hinged as at 14 to the floor of the pen being held by the detachable stays 16 engaging the ship's rail 17.

In the construction illustrated in Figure 4 the pen floor supporting members 18, 19 are detachably mounted to the floor and the ship's side 20 by wing nuts 21 or other fasteners while the floor is hinged as at 22 to the ship's side. This construction enables the floor 6 and rail 15 to be folded against the ship's rail 17 when not required for storing cattle and pithing and dressing.

After dressing the carcasses are delivered by the suspended runways or rails 25 by any suitable conveying means, which may consist of slidable hooks through the doors 24 to the chilling chambers 23.

From the chilling chambers 23 the meat is then divided and conveyed to freezing chambers below the hatches 27 and indicated by dotted lines 26 Figures 1 and 2, the usual freezing machinery indicated by dotted lines 28 being provided. After freezing, the quarters are stored in the cool chambers in the usual way.

It will be obvious that the hides can be stored and the tallow refined and stored by the provision of any suitable form of tallow coolers 30, tallow refiners 31 and digestors 32, the resultant products being stored below the hatch 33.

A ship having means constructed, arranged and operating as above described will be of great utility particularly for the reason that stock is economically handled and readily transported in the frozen state to distant markets.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

1. A vessel equipped for the killing of animals and the dressing freezing and storing of carcasses and provided with removable or collapsible extensions attached to and extending along one or both sides of the vessel for standing the animals prior to slaughter.

2. A vessel equipped for the killing of animals and the dressing freezing and storing of carcasses and provided with removable or collapsible grid-like exten-

5 sions attached to and extending along
one or both sides of the vessel to enable
animals to be embarked with ease and to
stand prior to slaughter under sanitary
conditions and with good ventilation and
cooling facilities.

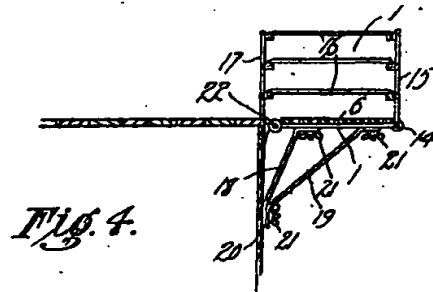
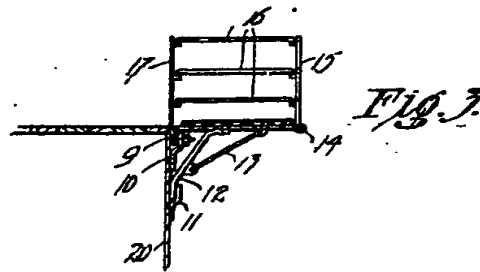
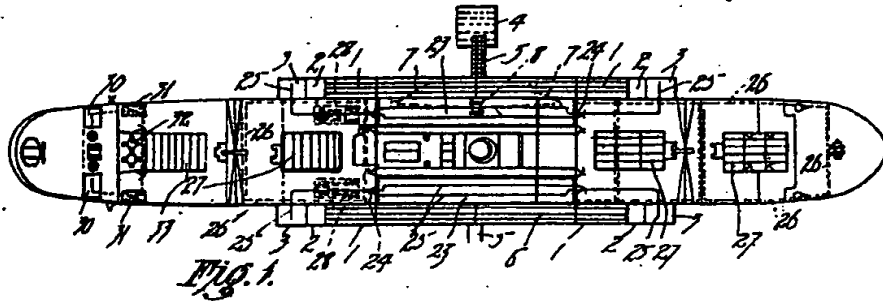
10 3. A vessel equipped for the killing
of animals and the dressing, freezing and
storing of their carcasses and provided
with sectionally composed gratings, and
supporting rails collapsibly hinged or
removably attached to the vessel and
extending outwardly along one or both,
15 sides, substantially as and for the pur-
poses specified.

4. A vessel equipped for the embark-
ing, penning and killing of animals and
the dressing freezing and storing of their
carcasses substantially as hereinbefore
described with reference to the accom- 20
panying drawings for the purposes
specified.

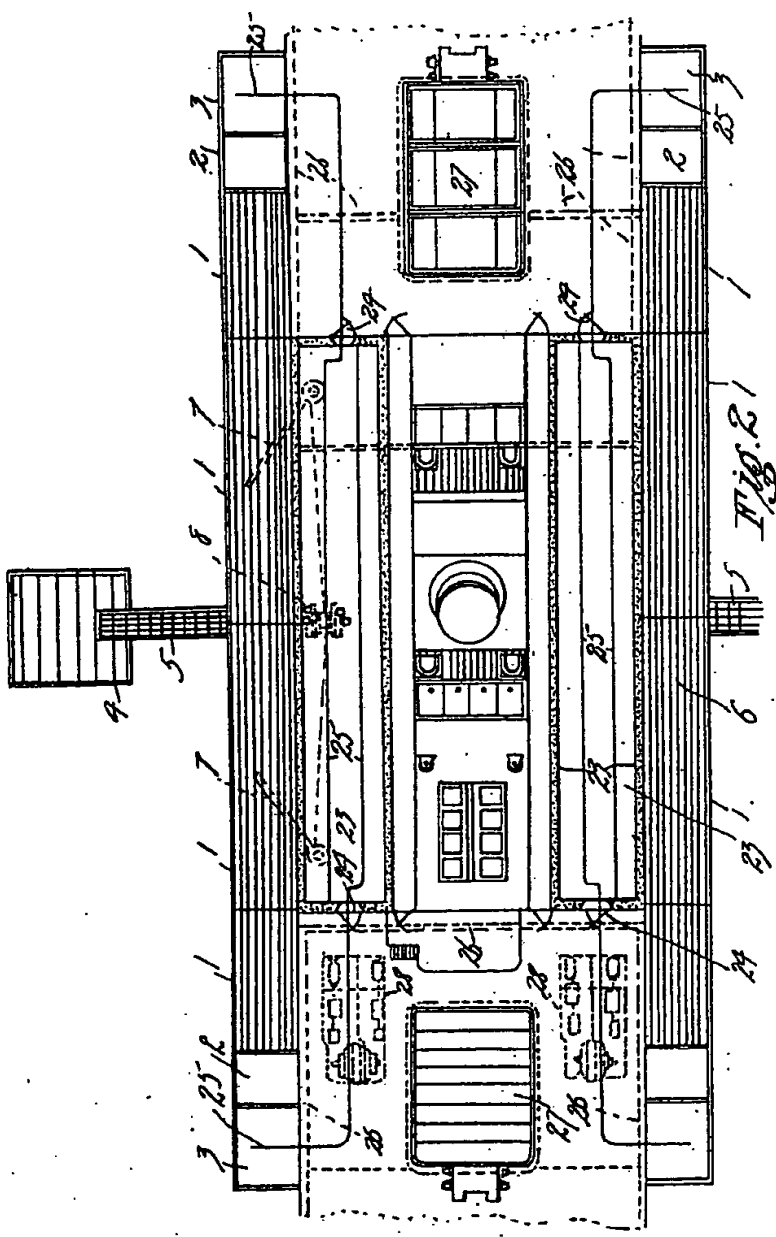
Dated the 16th day of September, 1921.

For M. MCGINNESS, 25
White, Langner, Stevens & Parry,
Chartered Patent Agents,
Jessel Chambers, 88—90, Chancery Lane,
London, W. C. 2, and
Liberty Tower, New York, U.S.A.

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